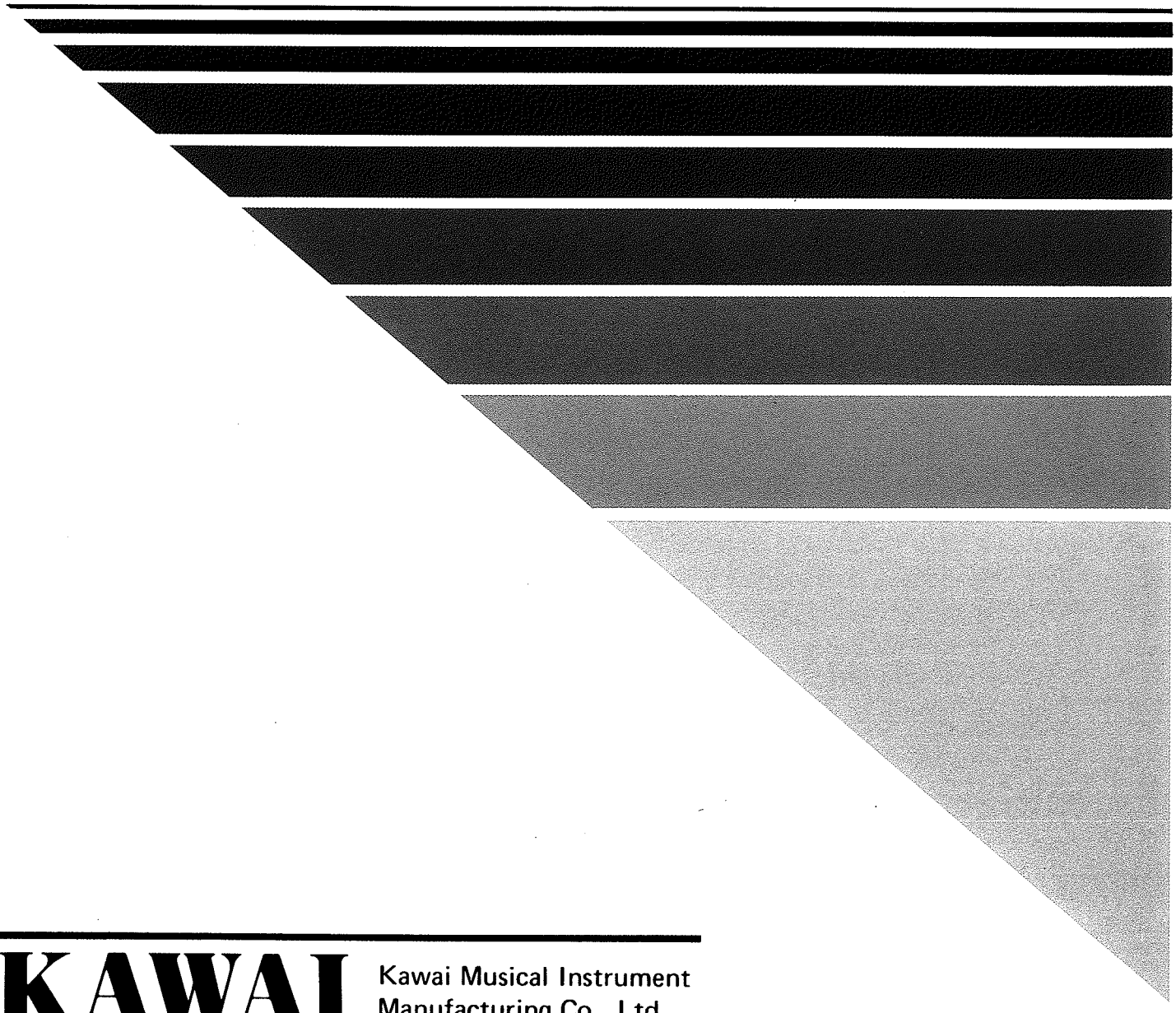
DIGITAL DRUM MACHINE

R-50

SERVICE MANUAL



KAWAI Kawai Musical Instrument Manufacturing Co., Ltd.

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1. R-50 P.W.B. INFORMATION

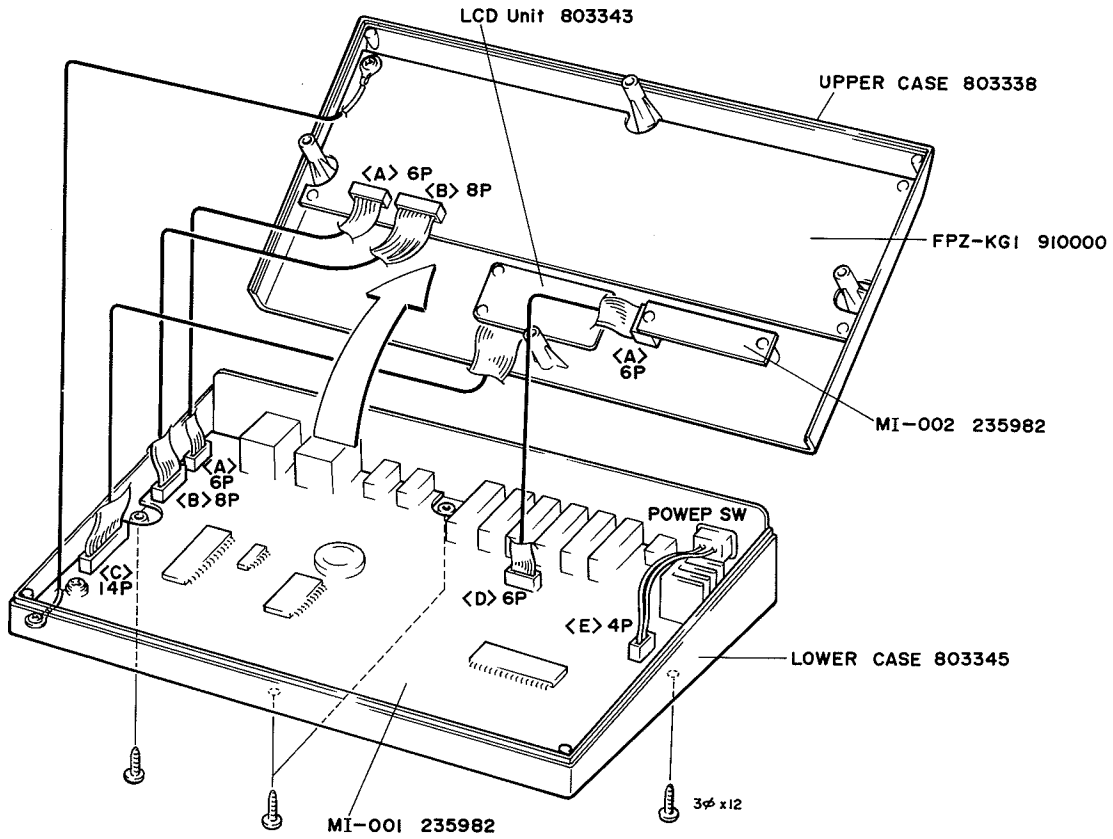
P.W.B. Name	Descrition	Code No.
MI-001 (1): Japan (2): U.S.A., Canada (3): Australia West germany Europe U.K.	CPU · RAM · ROM Section Address Generator Unit: Access Address Signals from ROM (Sound Generator) Data Generator Unit: Calculate Level, Pan etc using Data Signals from ROM (Sound Generation) Sample & Hold, MIDI Section	235981 235982 235983
MI-002 (1): Japan (2): U.S.A., Canada (3): Australia West germany Europe U.K.	Volume Section	235981 235982 235983
FP2-KG1	Panel SW section	910000

2. SPECIFICATIONS

MEMORIZED RHYTHM	:	PATTERN 100 (MAX.) SONG 10 (MAX.)
MELODY SOURCE	:	24 BD 1/2/3/, SD 1/2/3 TOM HI/MID/LO/, HH CLOSE/OPEN RIDE 1/2, CARSH 1/2, CHINA, COWBELL, CLAPS, SHAKER AGOGO, CONGA, TAMBOURINE, TIMBALE, CLAKES
CONTROLS AND INDICATORS	:	STEREO VOLUME COMMAND SELECT KEY ERASE KEY ACCENT KEY MUSICAL INSTRUMENT PAD (1) ~ (10) INCREMENT KEY DECREMENT KEY UP KEY DOWN KEY ENTER/TAP/REPAT KEY BACK/BAR COUNT KEY TEMPO KEY WITH INDICATOR START KEY STOP/CONT. START KEY
REAR PANEL	:	HEADPHONE STEREO OUT L (MONO)/R INDIVIDUAL OUT 1 ~ 8 MIDI: IN/OUT TAPE: IN TAPE: OUT FOOT SWITCH: A/B
POWER CONSUMPTION	:	5W
DIMENSIONS	:	320 (W) x 195 (D) x 51 (H) mm
WEIGHT	:	1.0 kg
OPTION	:	AC ADAPTER (PS-121D) OWNER'S MANUAL WAREANTY CARD PADINSTRUCTION OVERLEI SIGNAL CABLE
OPTION PEDAL SWITCH F-1	:	SOFT CASE

3. PARTS LIST

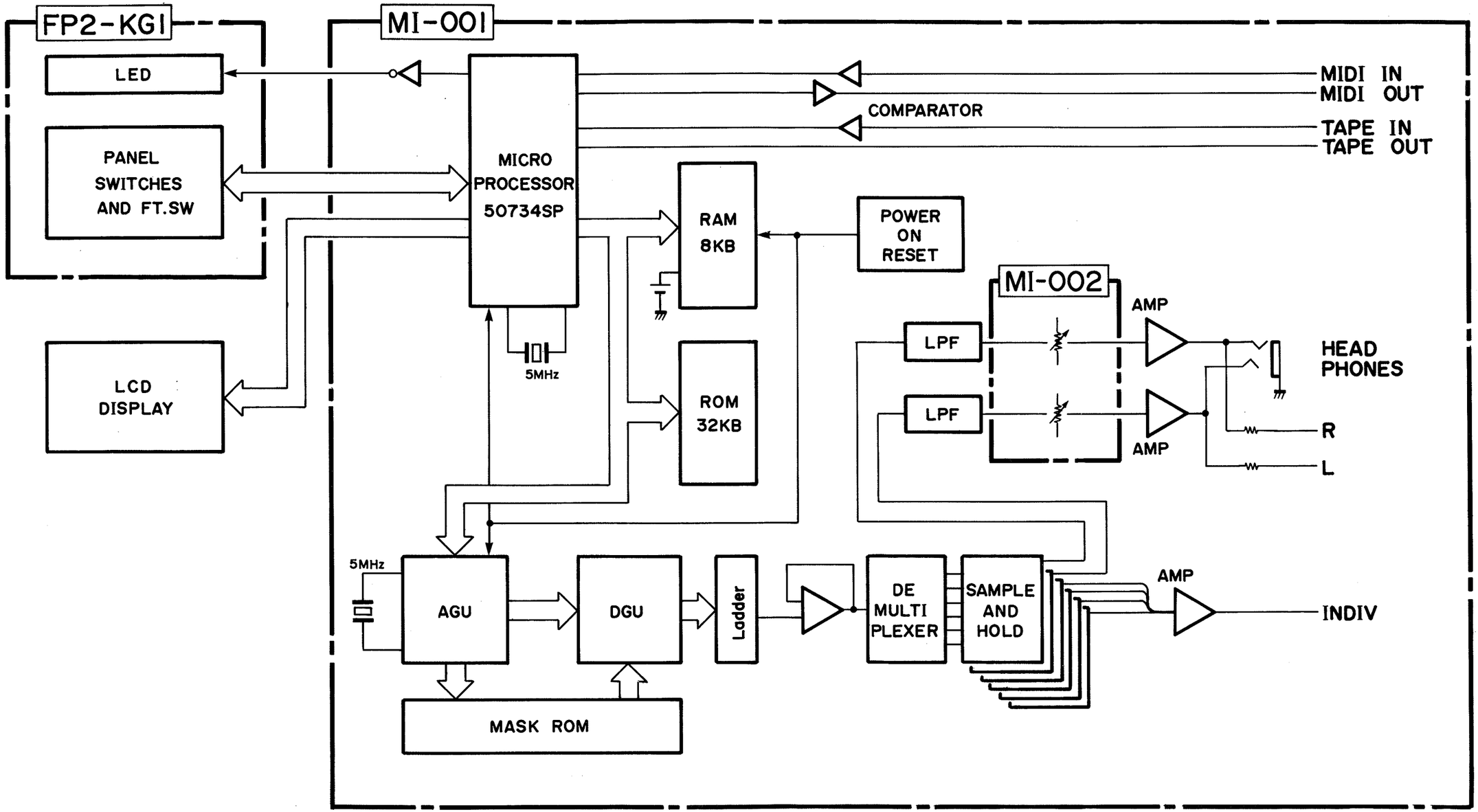
Code No.	Name	Country
789322	Middle code 2.5M S-L	All markets
802413	Power SW SDDJA1 No potch	All markets
803339	R-50 LCD cover	All markets
803340	SV knob D gray (W)	All markets
803341	EMFZ-1001 Dustproof cover	All markets
803349	AC adapter PS-121	Japan
803350	AC adapter PS-121	Canada, U.S.A.
803351	AC adapter PS-121	West germany, Europe
803352	AC adapter PS-121	Australia
803353	AC adapter PS-121	U.K.
803355	R-50 Pad sheet	All markets
803359	Cardboard R-50	All markets



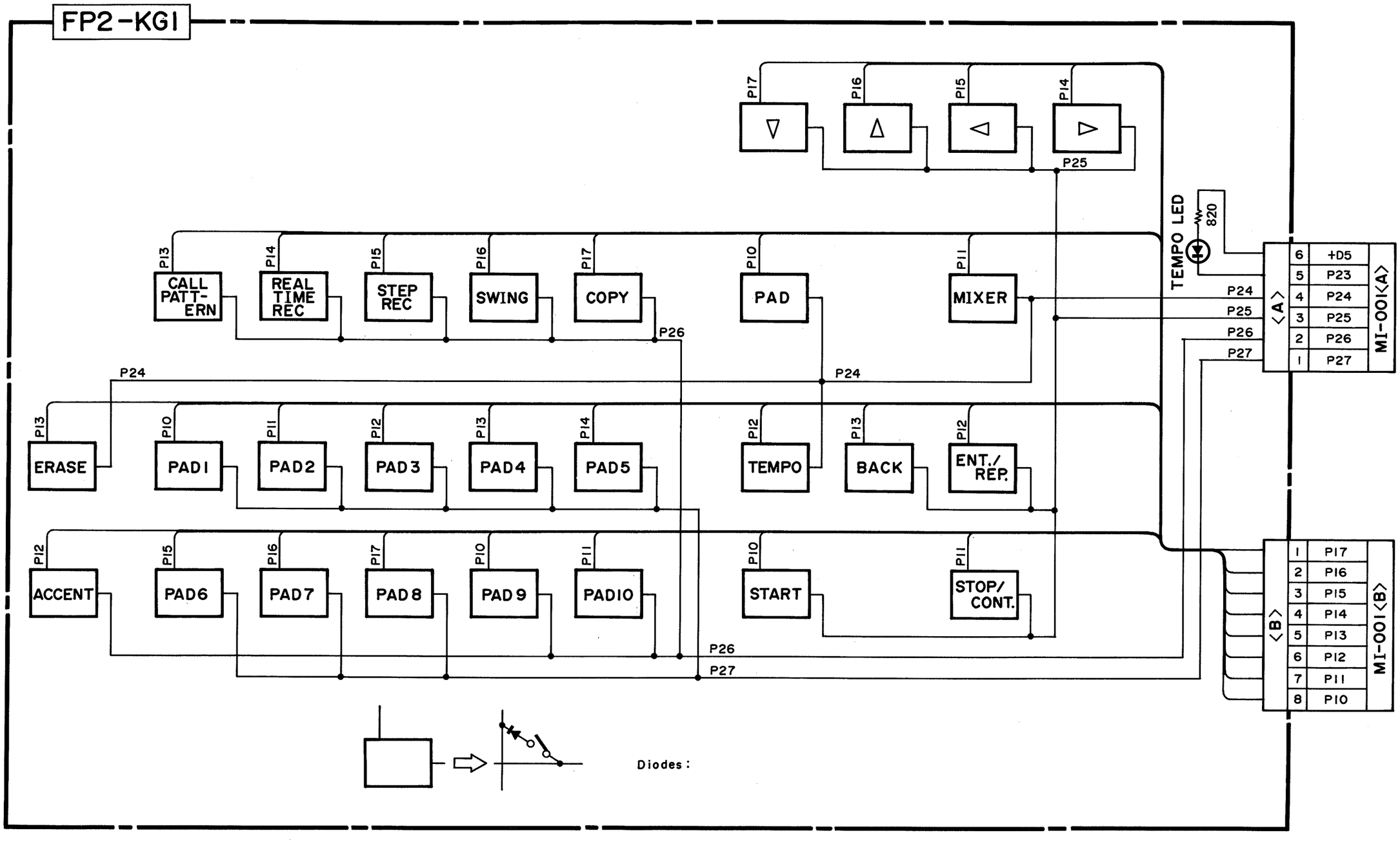
4. SEMICONDUCTORS LIST

	Name
IC	MB84051B
	TL-072CP
	TL 7705CP-B
	PC900
	MSM74HC04
	MSM74HC32
	MSM74HC139
	MSM74HC373
	AN7805F
	MSM74HC175
	8464-15LL-SK
	PC4556
	PC311C
	SN74LS07
	M60009-0103
	M60009-0104
	M50734SP
	MN234001KAA
	27C256A-25
Transistor	2SD1266Q
	2SC3331T
Diode	RM-1Z
	MTZ10C
	MA-700
	1S2473
	1SS133

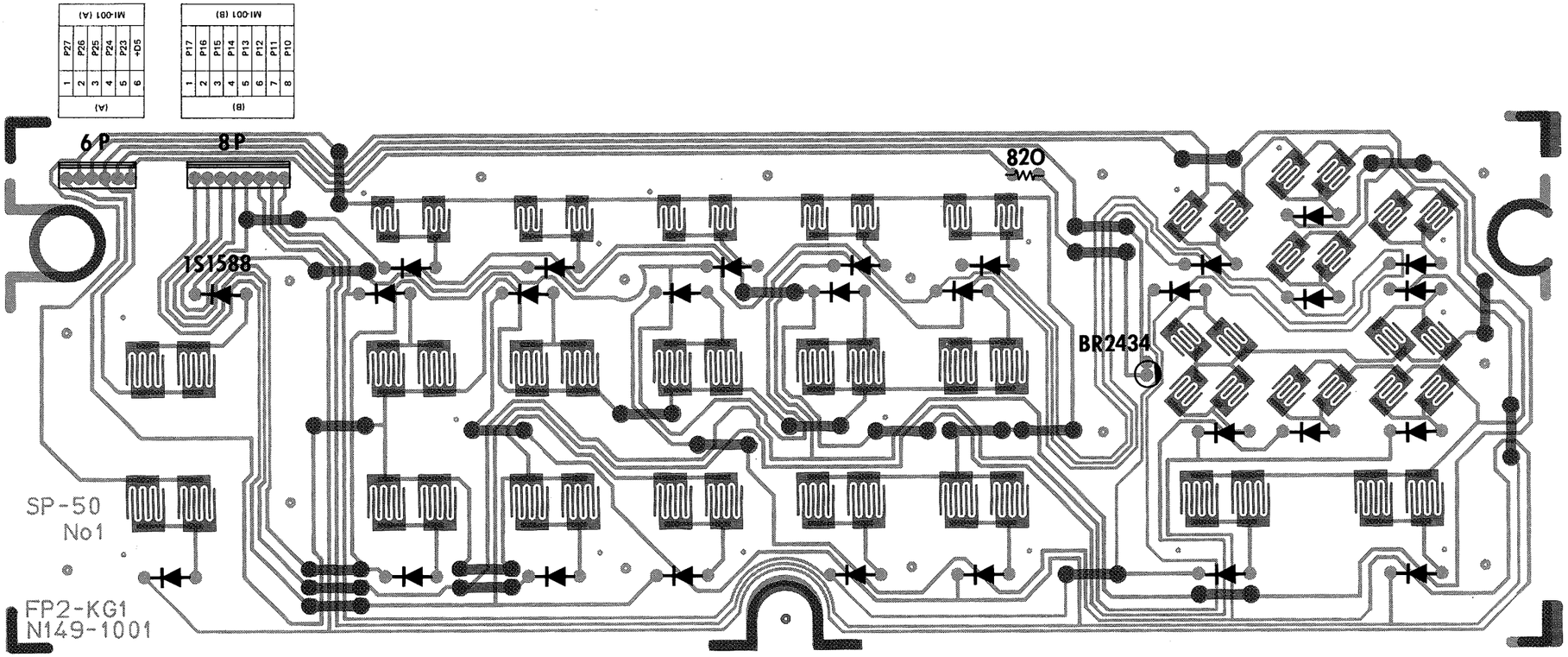
5. BLOCK DIAGRAM



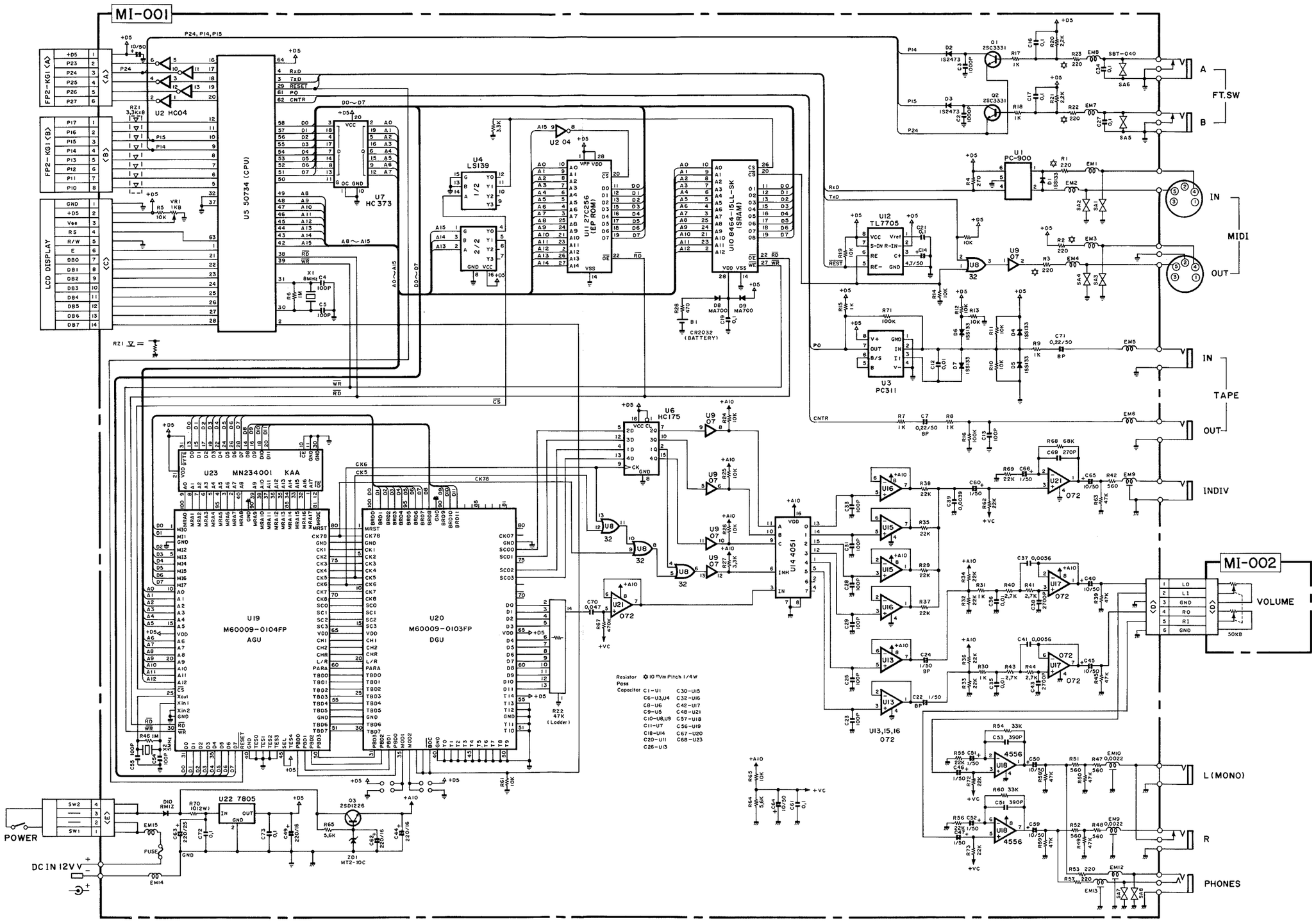
6. FP2-KG1 CIRCUIT



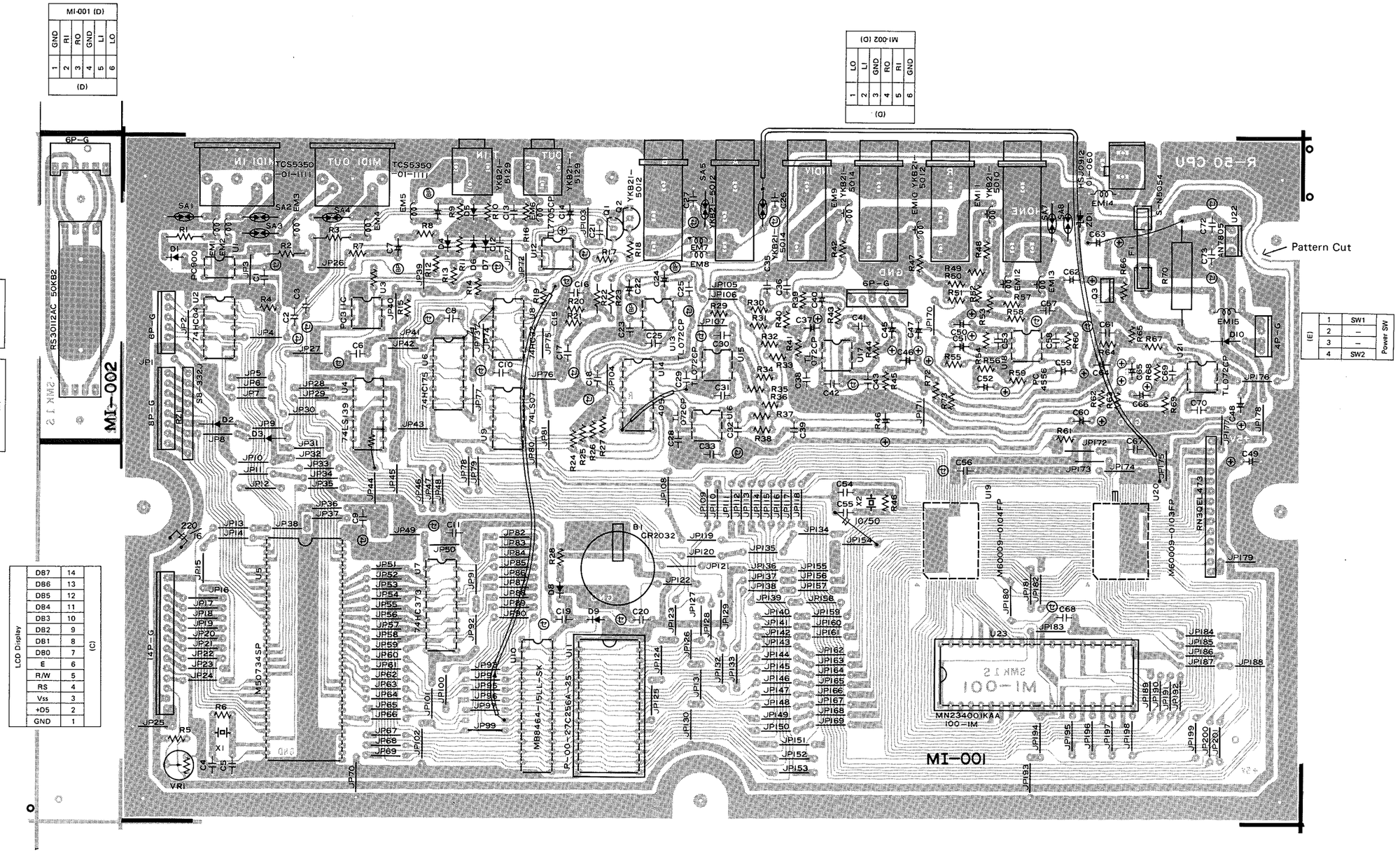
7. FP2-KG1 PRINTED CIRCUIT BOARD



8. MI-001, MI-002 CIRCUITS



9. MI-001, MI-002 PRINTED CIRCUIT BOARD



10. R-50 Drum Machine Troubleshooting Guide

SYMPTOM	CHECK METHOD	CHECK RESULTS	REPAIR LOCATION
LCD display is blank even though power is ON.	Check whether sounds are produced.	No sound produced.	Power circuitry of MI-001 circuit board. (fuse, U22, R70, connector E. etc.)
		Sound produced.	LCD line, LCD MI-001 connector E and related areas.
LCD display appears however only some sounds are produced.	Check 5th pin of U21 in synchro.	No signal waveform.	U19, U20 flat package soldering.
		Signal waveform produced.	Analog circuitry of MI-001 circuit board. (U13, 14, 15, 16, 17, 18, 21 and related areas)
Specific sounds are not produced.	Check INDIV ASSIGN assignment and level of MIXER LEVEL PAD.	Instrument assigned to INDIV or MIXER PAD LEVEL set to "0".	No malfunction.
Distortion can be heard.	Check relationship to sound.	Distortion produced along with sound.	Ladder resistor RZ-2, Soldered sections of U19, U20.
		Distortion not related to instrument sound.	Analog circuitry of MI-001 circuit board. (U13, 14, 15, 16, 17, 18, 21 and related areas)
Operational keys do not function when pressed.	Check number of inoperable keys.	Singular Multiple	Diodes on FP2-KG1 panel circuit board. Connectors A and B of MI-001 circuit board and panel lines.
Data scrambled when power is turned OFF.	Check voltage at terminals of lithium battery.	Lower than 2.0 V.	Replace lithium battery.